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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,953	06/29/2001	Nelson Raymond Corby JR.	RD-27700	1038

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EXAMINER
PAIK, STEVE S

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 01/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)
Office Action Summary	09/681,953		CORBY, NELSON RAYMOND
	Examiner		Art Unit
	Steven S. Paik		2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2002* .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-10 and 12-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-10 and 12-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   Receipt is acknowledged of the Amendment filed October 23, 2002.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claim 12 recites the limitation "said first and second codes" in line 1 of page 3 of the

Amendment filed October 23, 2002. There is insufficient antecedent basis for this limitation in

the claim. The examiner respectfully suggests amending the limitation to -- said respective

codes -- if that is what applicant intends to claim.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5.   Claims 1-5, 7-10, 12-20 are rejected under 35 U.S.C. 102(e) as being anticipated by

Behrens (USP 6,434,340).

Regarding claim 1, Behrens discloses a data representation comprising:

at least one multiplicity of machine-detectable marks (col. 4, ll. 64-67 and col. 5, ll. 1-10)

arranged in accordance with a two-dimensional redundant bit patterns (col. 4, ll. 62-65), said at

least one multiplicity of marks having an appearance to human vision resembling a first

character (col. 2, ll. 17-22, col. 3, ll. 29-31, col. 4. ll. 61-63 and see Fig. 2), and said two-

dimensional redundant bit patterns (col. 4, ll. 62-65), comprising a repeating pattern of a bit

string (binary 1's and 0's) forming a respective machine readable code corresponding to at least

one character.

Regarding claim 2, Behrens discloses the data representation as recited in rejected claim

1 stated above, further comprising a plurality of respective multiplicities of machine-detectable

marks (5) arranged in accordance with the two dimensional redundant bit patterns (col. 4, ll. 62-

65), each of said respective multiplicity of marks (1 and 5) having an appearance to human

vision resembling a respective character (5).

Regarding claim 3, Behrens discloses the data representation as recited in rejected claim

2 stated above, further comprising machine detectable respective spatial registration indicators

(42 and 44 in Fig. 2) placed such that each of said respective multiplicities of machine-detectable

marks are combinable by aligning said respective spatial registration indicators such that said

respective combined multiplicity of marks remain machine detectable (col. 3, ll. 61-67 and col.

4, ll. 1-9).

Regarding claim 4, Behrens discloses the data representation as recited in rejected claim

1 stated above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67)

superimposed on an optically contrasting background (such as film 18).

Regarding claim 5, Behrens discloses the data representation as recited in rejected claim

1 stated above, where said code is ASCII code (col. 5, ll. 11-15).

Regarding claim 7, Behrens discloses a data representation comprising:

a plurality of human readable characters (1 and 5) formed in respective areas (see Fig. 2)

containing arrays of machine detectable marks (binary 1's and 0's scanned column by column),

each of said arrays of machine detectable marks (col. 3, ll. 33-36) arranged in accordance with a

two-dimensional redundant bit patterns (col. 4, ll. 62-65), each of said arrays of machine

detectable marks in said respective areas having shapes indicative of said human-readable

characters (col. 2, ll. 17-22, col. 3, ll. 29-31 and see Fig. 2), and each of the two-dimensional

redundant bit patterns comprising a repeating pattern of a bit string (binary 1's and 0's) forming

respective machine detectable codes corresponding to said human-readable characters

Regarding claim 8, Behrens discloses the data representation as recited in rejected claim

2 stated above, further comprising machine detectable respective spatial registration indicators

(42 and 44 in Fig. 2) placed such that each of said respective multiplicities of machine-detectable

marks are combinable by aligning said respective spatial registration indicators such that said

respective combined multiplicity of marks remain machine detectable (col. 3, ll. 61-67 and col.

4, ll. 1-9).

Regarding claim 9, Behrens discloses the data representation as recited in rejected claim 7 stated above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67) superimposed on an optically contrasting background (film 18).

Regarding claim 10, Behrens discloses the data representation as recited in rejected claim 7 stated above, where the codes are ASCII codes (col. 5, ll. 11-15).

Regarding claim 12, Behrens discloses a system comprising:

a part comprising a plurality of respective multiplicities of machine-detectable marks (col. 3, ll. 33-36) arranged in accordance with a two-dimensional redundant bit patterns (col. 4, ll. 62-65), each of said respective multiplicities of marks having an appearance to human vision resembling a respective character (col. 2, ll. 17-22, col. 3, ll. 29-31 and see Fig. 2), and said two-dimensional redundant bit patterns comprising a repeating pattern of bit string (binary 1's and 0's) forming respective codes corresponding to said reflective character (1 or 5) (col. 5, ll. 11-15);

an imager (scanner which inherently comprises, among other things, photodetector) for imaging an area of the part occupied by the marks to produce electrical signals having characteristics which allow discrimination between electrical signals derived from imaging of marks and electrical signals derived from imaging of areas outside of marks (by ADC 42); and

a computer (12 in Fig. 1) programmed to derive the first and second codes from the electrical signals outputted by the imager.

Regarding claim 13, Behrens discloses the system as recited in rejected claim 12 stated above, where said computer is programmed to perform the steps of:

digitizing (via ADC 42) the acquired image to form respective bit maps comprising bits

corresponding to each of said respective human-readable character-shaped array of machine-

detectable marks (col. 3, ll. 33-36);

spatially registering said respective bit maps (col. 3, ll. 61-63);

forming a union of said respective spatially registered maps; and

detecting bit strings, corresponding to said respective codes in the composite bit map

resulting from the union of each of said spatially registered respective bit maps (col. 4, ll. 33-

39).

Regarding claim 14, Behrens discloses the data representation as recited in rejected claim

13 stated above, further comprising machine detectable respective spatial registration indicators

(42 and 44 in Fig. 2) placed such that each of said respective multiplicities of machine-detectable

marks are combinable by aligning said respective spatial registration indicators such that said

respective combined multiplicity of marks remain machine detectable (col. 3, ll. 61-67 and col.

4, ll. 1-9).

Regarding claim 15, Behrens discloses the system as recited in rejected claim 12 stated

above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67) superimposed on

an optically contrasting background (film 18).

Regarding claim 16, Behrens discloses the system as recited in rejected claim 12 stated

above, where the codes are ASCII codes (col. 5, ll. 11-15).

Regarding claim 17, Behrens discloses a method of presenting data comprising steps of:

forming respective human-readable characters (1 and 5) in respective areas (see Fig. 2)

on the part by applying respective arrays of machine-detectable marks (col. 3, ll. 33-36) arranged

in two-dimensional redundant bit patterns (col. 4, ll. 62-65), each of said respective arrays of

machine-detectable marks having respective shapes indicative of the respective human-readable

characters (col. 2, ll. 17-22, col. 3, ll. 29-31 and see Fig. 2), and said two-dimensional redundant

bit patterns comprising a repeating pattern of respective bit string (binary 1's and 0's) forming

respective codes corresponding to each of said respective human-readable characters ("1" or

"5").

Regarding claim 18, Behrens discloses a method of identifying parts comprising the

following steps:

marking a part with respective human-readable character-shaped (1 and 5) arrays of

machine-readable marks;

acquiring an image of the part marking (via scanner);

digitizing (via ADC 42) the acquired image to form respective bit maps comprising bits

corresponding to each of said respective human-readable character-shaped array of machine-

detectable marks (col. 3, ll. 33-36);

spatially registering said respective bit maps (col. 3, ll. 61-63);

forming a union of said respective spatially registered maps; and

decoding the composite bit map resulting from the union of each of said respective the

spatially registered bit maps to identify the part (col. 4, ll. 33-39).

Regarding claim 19, Behrens discloses a system for identifying parts comprising:

a part marked with respective human-readable character-shaped (1 and 5) arrays of

machine-detectable marks;

an imager (scanner) acquiring an image of the part marking; and

a computer programmed (12 in Fig. 1) programmed to perform the following steps:

digitizing (via ADC 42) the acquired image to form respective bit maps comprising bits

corresponding to each of said human readable character-shaped array of machine-

readable marks (col. 3, ll. 33-36);

spatially registering each of the respective bit maps (col. 3, ll. 61-63);

forming a union of said respective spatially registered maps; and

decoding the composite bit map resulting from the union of the spatially registered bit

maps to identify the part (col. 4, ll. 33-39).

Regarding claim 20, Behrens discloses the system as recited in rejected claim 19 stated

above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67) superimposed on

an optically contrasting surface of the part (photographic film 18).

Response to Arguments

6.   Applicant's arguments filed 23 October 2002 have been fully considered but they are not

persuasive.

Rejection under 35 USC Section 102 (e)

The applicant argues that Behrens reference does not disclose the claim 1 recitation of "a

part marking comprising at least one multiplicity of machine -detectable marks arranged in

accordance with two-dimensional redundant bit patterns, said at least one multiplicity of marks

having an appearance to human vision resembling at least one character ....".

The examiner respectfully disagrees. Behrens discloses a marking which is

simultaneously readable to both a human and a machine. The human readable aspect is

represented in ASCII code format such as alphanumeric characters. The machine-readable

aspect is represented in binary 1's and 0's which is scanned column-by-column by a scanner.

Accordingly, Behens reference still reads on the amended claims and the rejections are

maintained.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
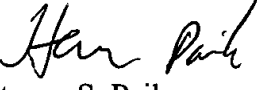
A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven S. Paik whose telephone number is 703-308-6190. The

examiner can normally be reached on Mon - Fri (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-308-7722 for regular

communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

/ Steven S. Paik
Examiner
Art Unit 2876

ssp
December 30, 2002

MICHAEL G. LEE
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